

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Status of Claims:

No claims are currently being added or cancelled.

Claim 24 is currently being amended.

This amendment and reply amends claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claims remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1, 3-12 and 15-24 are pending in this application.

Indication of Allowable Subject Matter:

Applicants appreciate the indication in the Office Action that claim 12 is allowed, and the fact that claim 24 is not rejected over any art of record.

Claim Rejections – 35 U.S.C. § 112, 2nd Paragraph:

In the Office Action, claim 24 was rejected under 35 U.S.C. § 112, 2nd Paragraph, as being indefinite, for the reasons set forth on page 2 of the Office Action. Claim 24 has been amended to overcome this rejection.

Claim Objections:

In the Office Action, claim 24 was objected to, for the reasons set forth on page 3 of the Office Action. Claim 24 has been amended to overcome this objection.

Claim Rejections – 35 U.S.C. § 103(a):

In the Office Action, claims 1, 3, 18, 22 and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2001/0015446 to Inoue in view of Japanese Laid-Open Patent Publication 2000-323495 to Shinji; claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Inoue in view of Shinji and Tan et al. (“The Effect of Dielectric Stress on the Electrical Characteristics of AlGaIn/GaN Heterostructure

Field Effect Transistors”); claims 5, 6 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Inoue in view of Shinji and further in view of U.S. Patent No. 6,483,135 to Mizuta et al.; claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Inoue in view of Shinji and further in view of U.S. Patent Publication No. 2003/0020092 to Parikh et al.; claims 8-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Inoue in view of Tan et al.; claims 16 and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Inoue in view of Shinji and Mizuta et al. and further in view of U.S. Patent Publication No. 2001/0017370 to Sheppard et al.; and claims 19-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Inoue in view of Shinji and further in view of U.S. Patent Publication No. 2002/0043697 to Hirokawa. These rejections are traversed for at least the reasons given below.

It would not be obvious for one of ordinary skill in the art to combine the teachings of Inoue and Shinji in the manner suggested in the Office Action. Specifically, the transistor of Shinji is a Junction Field Effect Transistor, a JFET, which is formed by diffusing an impurity in the substrate to make a drain region, a source region, a channel region and a P+ region. Controlling the depletion layer formed by the P+ region and the channel region drives the transistor of Shinji, in which a protective film 32 consisting of an SiN film and an SiO₂ film is used to inhibit impurity diffusion depth variation of the P+ region.

Inoue discloses a field effect transistor, a FET. In the FET transistor of Inoue, an insulating film (cap layer) 605 is formed on an electron donor layer 604, as shown in Figures 6A – 6C of Inoue. In Inoue, the layer on which the insulating film is formed is not an impurity diffusion layer, and the insulating film itself is not an impurity diffusion layer.

Put in another way, the protective film 32 of Shinji is provided on an impurity diffusion layer in order to inhibit impurity diffusion depth variation of an impurity diffusion layer, and would serve no purpose in the FET transistor of Inoue.

Therefore, one of ordinary skill in the art would not be motivated to apply a protective film consisting of an SiN film and an SiO₂ film to the transistor of Inoue.

Accordingly each of the presently pending independent claims under rejection patentably distinguishes over the cited art of record, and in which none of the other cited art of record rectifies the above-mentioned deficiencies of Inoue and Shinji.

Conclusion:


Since all of the issues raised in the Office Action have been addressed in this Amendment and Reply, Applicants believe that the present application is now in condition for allowance, and an early indication of allowance is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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